



Mus_musculus	1	MRFREQLGGSAAIFGAILQACRLLVAFCAHLGIVVYISGRDLSRIPQLVGVSTTL
Cricetulus_griseus	1	MRFLRPVLGGSAAIFGAILQACRLLVAFCAHLGIVVYISGRDLSRIPQLVGVSTTL
Homo_sapiens	1	MRLREPLLGSAAIFGASLQACRLLVAFCAHLGIVVYISGRDLSRIPQLVGVSTPL
Bos_taurus	1	MKPREPLLGSAAIFGASLQACRLLVAFCAHLGIVVYISGRDLSRIPQLVGVSTPL
Gallus_gallus	1	-----MKEPAIFGTSLQACRLLVAFCAHLGIVVYISGRDLSRIPQLVGVSTPL
Homo_sapiens_B4GALT2	1	-----MSRLGGTLEKCKAIFLCLIFLVAIFLFDVYAQHLAFFSRFSARGP
Xenopus_laevis	1	-----MRRVLERPCTLAIFLGFQFAFVYFSSGGLRSLAFVGR-----
Homo_sapiens_B4GALT3	1	-----LRLRLERPCTLAIFLGSQAVMYSLGGFRSLAFVGR-----
Homo_sapiens_B4GALT4	1	-----MCFNLTFHLSYKFRLLLTCLTVVGWATSNYFVGAIQ-----
Ciona_intestinalis	1	MSLRHQYNKGLVKRTNYGLRAKWLITCLIFAEIVVYRIHDVILVLSLHNLKLD
Homo_sapiens_B4GALT6	1	-----MSVRRMRVSNRSLAFVFFFSLSSTLYIVVAPGIANTYLFMQAQG
Homo_sapiens_B4GALT5	1	-----MRARRCLRLPRKSLIAVFFFSLSSTLYIVVAPGIANTYLFMQAQG
Homo_sapiens_B4GALT7	1	-----MFPSSRRKIAVLPWEDGRSGLEGGGLPRKCSVILVFAVLS-----

Mus_musculus	61	QGGTN---GAAASKQPPGEQPRGARPPPELGVSPKIPGLDSSPGAAIGPGLKSN---
Cricetulus_griseus	61	RSGTI---GATANKQPP-----GARPPPEVGVSPKIPGPDSPGTAFDPLKSN---
Homo_sapiens	61	QGGSN---SAAAIQSSGELRTGGARPPPELGASIQPPGSDSPVVDIGPGFASN---
Bos_taurus	61	QGSSH---GAAAIQSPGELRLRGVAPPPPELQNSIPPSRAPSNLDAYIHPGPGPGPGS
Gallus_gallus	53	PPANL-----SLPP-----SRPEPPPAAPSPGPGVSPQPNLPDSAPSG---
Homo_sapiens_B4GALT2	51	AHALHPAAS-----SSSSSSNCIPENATASSGSLPEVPSALPGP---
Xenopus_laevis	41	-----SSEESFDYRTIDVYSNLSLVNIMVPPSTE---
Homo_sapiens_B4GALT3	41	-----DQGETFDYSRTIDVYSNLSLHLP-GAPGGPP---
Homo_sapiens_B4GALT4	40	-----EIPKAKEFMANFHKTLILGKGLLTNEAST---
Ciona_intestinalis	60	-----WIRGLETNCEAVPGHNSLKDSRALLNGGEN---
Homo_sapiens_B4GALT6	51	IMLRENVKTIG-----HMIRIYTNKNSTLNGTDYPEGNSSDYLVQTTIYLPENFT---
Homo_sapiens_B4GALT5	51	ILIRDNVRTTGAQVYEQVLRSAAYAKRNSSVNDSDYPLDLNHSEFLQTTIFLPEDFT---
Homo_sapiens_B4GALT7	41	-----LGFFLLWLQLSCSGDVARAVRGQGG---

Mus_musculus	114	LSSLVPVPTTGLLSLEACPESPELLVGPMLDFN--IADLLAKKNPEIKTCGRYSK
Cricetulus_griseus	108	WTSVLVPPTTALLTLPACPESEPELLVGPMLDFN--IADLLAKKNPEIKMGGRYSK
Homo_sapiens	114	LTSVPVPHTTALS-LEACPESPELLVGPMLDFN--MPDLLAKKNPEIKMGGRYSK
Bos_taurus	117	NLTSAPVFSTTTRSLTACPESEPELLVGPMLDFN--IPVDLKLKQONPEIKMGGRYSK
Gallus_gallus	92	-----LCFVPEPELLVGPMLDFN--QPYNLEFVASTNPEVREGGRAPK
Homo_sapiens_B4GALT2	90	-----TAPTLPPEPESEPELLVGPMLDFN--SPYPLERQRENPEVLMGGRYTPP
Xenopus_laevis	71	-----EDTLERCPORSEPLVGPMLDFN--QIPTLRKTHKNPELVFGGGRYKPP
Homo_sapiens_B4GALT3	70	-----APQGLEPCPESEPELLVGPMLDFN--PVPSLAETVERNERVEHGRYRPA
Homo_sapiens_B4GALT4	70	-----KKVEIDNCPESEPELLVGPMLDFN--PDITLPEVQAEKPEVSRG-RYRFP
Ciona_intestinalis	90	-----ASPLPECEPESEPELLVGPMLDFN--EDVSLDEVKNYTVEFGGRKPEA
Homo_sapiens_B4GALT6	102	-----YSPYLECPEKLEPESEPELLVGPMLDFN--HQSFKDLDPEPGGHYRFP
Homo_sapiens_B4GALT5	108	-----YFANHTEPERLESIMKGPIDNMSEIGMDYTHEFYSKDETHKLGGRKES
Homo_sapiens_B4GALT7	67	-----ETSGPPRACPEPEPEPEHEED

Mus_musculus	172	DCVSPHKVAILIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV
Cricetulus_griseus	166	DCISPHKVAILIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV
Homo_sapiens	171	DCVSPHKVAILIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV
Bos_taurus	175	DCISPHKVAILIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV
Gallus_gallus	134	OCKALQKVAILIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV
Homo_sapiens_B4GALT2	138	DCVPAQVAILIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV
Xenopus_laevis	119	NCEARNTAILIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV
Homo_sapiens_B4GALT3	118	GCEPRNTAILIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV
Homo_sapiens_B4GALT4	117	CKALQKVAILIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV
Ciona_intestinalis	138	CCVPRHKVAILIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV
Homo_sapiens_B4GALT6	151	DCKPRWKVAILIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV
Homo_sapiens_B4GALT5	157	DCMFRWKVAILIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV
Homo_sapiens_B4GALT7	88	ASWQPHKVAIIPFRNRBEHLAYLYLHPILQROQLDYGIVINQAGDTMFNRAKLLNV

Mus_musculus	232	GFQEALKD-YDYNCFFSFDVLDLIPIDDRNAYRCFSQP-RHLSVAMDKFGSLPYVQYFGG
Cricetulus_griseus	226	GFQEALKD-HDYNCFFSFDVLDLIPIDDRNAYRCFSQP-RHLSVAMDKFGSLPYVQYFGG
Homo_sapiens	231	GFQEALKD-YDYTCFFSFDVLDLIPIDDRNAYRCFSQP-RHLSVAMDKFGSLPYVQYFGG
Bos_taurus	235	GFQEALKD-YDYNCFFSFDVLDLIPIDDRNAYRCFSQP-RHLSVAMDKFGSLPYVQYFGG
Gallus_gallus	194	GFQEALKD-YDYDCFFSFDVLDLIPIDDRNAYRCFSQP-RHLSVAMDKFGSLPYVQYFGG
Homo_sapiens_B4GALT2	198	GFQEALKD-YDYDCFFSFDVLDLIPIDDRNAYRCFSQP-RHLSVAMDKFGSLPYVQYFGG
Xenopus_laevis	179	GVKEALKD-EDYDCFFHFDVLDLIPENDENLYVCDPWSF-RHLSVAMDKFGSLPYVQYFGG
Homo_sapiens_B4GALT3	178	GVKEALKD-EDYDCFFHFDVLDLIPENDENLYVCDPWSF-RHLSVAMDKFGSLPYVQYFGG
Homo_sapiens_B4GALT4	177	GVKEALKD-EDYDCFFHFDVLDLIPENDENLYVCDPWSF-RHLSVAMDKFGSLPYVQYFGG
Ciona_intestinalis	198	GVKEALKD-DDYDCFFHFDVLDLIPENDENLYVCDPWSF-RHLSVAMDKFGSLPYVQYFGG
Homo_sapiens_B4GALT6	211	GFQEALKD-SVDYDCFFHFDVLDLIPENDENLYVCDPWSF-RHLSVAMDKFGSLPYVQYFGG
Homo_sapiens_B4GALT5	217	GFQEALKD-LDYDCFFHFDVLDLIPENDENLYVCDPWSF-RHLSVAMDKFGSLPYVQYFGG
Homo_sapiens_B4GALT7	148	GFQESSNS---TDYIAMHDVLDLIPENDENLYVCDPWSF-RHLSVAMDKFGSLPYVQYFGG

Mus_musculus	290	VSALSCKOFLINGFPNRYWGWGGEDDDIENRIVHKGMSSISRENVVGCORMIHSRDKK
Cricetulus_griseus	284	VSALSCKOFLINGFPNRYWGWGGEDDDIENRIVHKGMSSISRENVVGCORMIHSRDKK
Homo_sapiens	289	VSALSCKOFLINGFPNRYWGWGGEDDDIENRIVHKGMSSISRENVVGCORMIHSRDKK

Bos\_taurus 293 VSALSKQOFTIRINGFPNNYWGCGGEDDDIINRFAFRGMSVSRPNVVGICRMIEHSRDKK  
 Gallus\_gallus 252 VSALSKQOFTIRINGFPNNYWGCGGEDDDIINRVFKGMCISRPDVEGICRMIESHSDKK  
 Homo\_sapiens\_B4GALT2 257 VSALSKQOFTIRINGFPNNYWGCGGEDDDIINRSLTGMIKISRPTIRIGYRMIREDRDKH  
 Xenopus\_laevis 238 VSALPPOFTIRINGFPNNYWGCGGEDDDIATRRLGGMKIRPSVSVGYYIMVHRGDKG  
 Homo\_sapiens\_B4GALT3 237 VSALPPOFTIRINGFPNNYWGCGGEDDDIATRRLAGMKISRPTTSVGYYIMVHRGDKG  
 Homo\_sapiens\_B4GALT4 235 VSALSRQOFTIRINGFPNNYWGCGGEDDDIRLRDELQRMKISRPLPEVGYYIMVHRGDKG  
 Ciona\_intestinalis 256 VITAMTKQOFAQNGCSNEYWGCGGEDDDIVRLLHSCIGTERAQYIVAYRMAVHPSPDKS  
 Homo\_sapiens\_B4GALT6 269 VSLLTVQOFRIRINGFPNARWGCGGEDDDIINRHYAGYNLRPEEDCGYKSTPHHHRGE  
 Homo\_sapiens\_B4GALT5 275 VSLLTVQOFRIRINGFPNARWGCGGEDDDIINRQMAQYSVRPEEDTCKYKSTPHHHRGE  
 Homo\_sapiens\_B4GALT7 203 LLILLSKOHRLCNGMSNRWGCGGEDDEFRRLKGAGQOFRPSITTCYKTPFELHHPA

Mus\_musculus 350 NEPNPQRFDRFAHTK--EIMRFDGLNSLTYKVLDFQRYPLYTBITVDIGTFR-----  
 Cricetulus\_griseus 344 NEPNPQRFDRFAHTK--EIMRFDGLNSLTYKVLDFQRYPLYTKITVDIGTFR-----  
 Homo\_sapiens 349 NEPNPQRFDRFAHTK--EIMLSDGLNSLTYKVLDFQRYPLYTBITVDIGTFR-----  
 Bos\_taurus 353 NEPNPQRFDRFAHTK--EIMLSDGLNSLTYKVLDFQRYPLYTKITVDIGTFR-----  
 Gallus\_gallus 312 NEPNPQRFDRFAHTK--EIMSSDGLNSLTYKVLDFQRYPLYTBITVDIGTFR-----  
 Homo\_sapiens\_B4GALT2 317 NEPNPQRFDRFAHTK--EIMSSDGLNSLTYKVLDFQRYPLYTBITVDIGTFR-----  
 Xenopus\_laevis 298 NEPNPQRFDRFAHTK--EIMSSDGLNSLTYKVLDFQRYPLYTBITVDIGTFR-----  
 Homo\_sapiens\_B4GALT3 297 NEPNPQRFDRFAHTK--EIMSSDGLNSLTYKVLDFQRYPLYTBITVDIGTFR-----  
 Homo\_sapiens\_B4GALT4 295 NEPNPQRFDRFAHTK--EIMSSDGLNSLTYKVLDFQRYPLYTBITVDIGTFR-----  
 Ciona\_intestinalis 316 NRVPNRYRKLRYGAA--EIQHDLNMLHSLSEKTLQPLYTNIADYKPELNPKTGVGF  
 Homo\_sapiens\_B4GALT6 329 VQFLG-RYKLRYSK--EIQYDGLNMLHSLSEKTLQPLYTNIADYKPELNPKTGVGF  
 Homo\_sapiens\_B4GALT5 335 VQFLG-RYKLRYSK--EIQYDGLNMLHSLSEKTLQPLYTNIADYKPELNPKTGVGF  
 Homo\_sapiens\_B4GALT7 263 WRKRDOGRIAAQOQOQKVDREGGLNMLHSLSEKTLQPLYTNIADYKPELNPKTGVGF

Mus\_musculus -----  
 Cricetulus\_griseus -----  
 Homo\_sapiens -----  
 Bos\_taurus -----  
 Gallus\_gallus -----  
 Homo\_sapiens\_B4GALT2 -----  
 Xenopus\_laevis 356 RGPTPPAISHYINTTKNTFADGGQIRNPADHPTNDSINEAELSAERRNKGPVVAPESTLA  
 Homo\_sapiens\_B4GALT3 355 PRYPGSSQAQFRQEMLRPPARPGPLSTANHTALRGSH-----  
 Homo\_sapiens\_B4GALT4 -----  
 Ciona\_intestinalis 374 GTGIDIVVSISLLLLMLTMTCTCVKSRLPHVLLCPRIIP-----  
 Homo\_sapiens\_B4GALT6 -----  
 Homo\_sapiens\_B4GALT5 -----  
 Homo\_sapiens\_B4GALT7 323 WCTFS-----

Mus\_musculus -----  
 Cricetulus\_griseus -----  
 Homo\_sapiens -----  
 Bos\_taurus -----  
 Gallus\_gallus -----  
 Homo\_sapiens\_B4GALT2 -----  
 Xenopus\_laevis 416 EKLSLPMASAPHSAGGEDKQISVIRSMKDNNGNRVKEVQAHRVKKKSRVQRSSKLERQVE  
 Homo\_sapiens\_B4GALT3 -----  
 Homo\_sapiens\_B4GALT4 -----  
 Ciona\_intestinalis -----  
 Homo\_sapiens\_B4GALT6 -----  
 Homo\_sapiens\_B4GALT5 -----  
 Homo\_sapiens\_B4GALT7 -----

Mus\_musculus -----  
 Cricetulus\_griseus -----  
 Homo\_sapiens -----  
 Bos\_taurus -----  
 Gallus\_gallus -----  
 Homo\_sapiens\_B4GALT2 -----  
 Xenopus\_laevis 476 LFGAEREKPKQDVGRSLPHLSRAPL  
 Homo\_sapiens\_B4GALT3 -----  
 Homo\_sapiens\_B4GALT4 -----  
 Ciona\_intestinalis -----  
 Homo\_sapiens\_B4GALT6 -----  
 Homo\_sapiens\_B4GALT5 -----  
 Homo\_sapiens\_B4GALT7 -----